

exercise 4.3

- 1** Use divisibility tests to see which of these numbers are divisible by
- | | | | | |
|-------------|-------------|--------------------|-------------|-------------|
| i 2 | ii 3 | iii 2 and 3 | iv 6 | |
| a 12 | b 15 | c 18 | d 26 | e 32 |
| f 36 | g 39 | h 56 | i 81 | j 96 |
- 2** Use divisibility tests to see which of these numbers are divisible by
- | | | | | |
|-------------|-------------|--------------------|--------------|-------------|
| i 2 | ii 5 | iii 2 and 5 | iv 10 | |
| a 12 | b 15 | c 20 | d 35 | e 85 |
- 3** Which of the following numbers are divisible by 3 but not 9?
- | | | | |
|------------------|--------------------|--------------------|--------------------|
| a 233 457 | b 7 564 896 | c 8 754 345 | d 8 765 475 |
|------------------|--------------------|--------------------|--------------------|
- 4** Which of the following numbers are divisible by 4 but not 8?
- | | | | |
|------------------|--------------------|--------------------|--------------------|
| a 145 672 | b 2 654 688 | c 3 647 812 | d 4 576 104 |
|------------------|--------------------|--------------------|--------------------|
- 5** Fill in the missing digits to make the following numbers divisible by the given number. State all possible answers.
- | | |
|------------------|----------------|
| a 124 56_ | Divisible by 2 |
| b 124 56_ | Divisible by 6 |
| c 1_7 643 | Divisible by 9 |
| d 648_64 | Divisible by 8 |
- 6** Which of the following statements are true?
- a** 463 752 is divisible by 2, 4 and 8.
 - b** 165 516 is divisible by 3, 6 and 9.
 - c** 543 876 is divisible by 4 and 12.
- 7** The Year 7 Social Service Committee ran a competition to guess the number of Smarties in a jar. The prize for guessing the correct number was the jar of Smarties, to be shared if more than one person guessed the correct answer.
- a** If there were 2763 Smarties and nine people guessed correctly, would it be possible to share the Smarties exactly between the nine winners?
 - b** How many Smarties would each of them get?

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challenge

- 8** Find out about divisibility tests for 7 and 11. The complicated divisibility tests probably take longer than dividing the number by 7 or 11!
- 9** When Tim asked his mother how old she was, she replied: 'The sum of the digits of my age is divisible by 9. The first digit has 3 different factors.' How old was Tim's mother?
- 10**
- a** Find the largest seven-digit number that is divisible by 6 and 9.
 - b** Find the smallest seven-digit number that is divisible by 4, 5 and 9.
 - c** What even number between 200 and 300 is divisible by 5 and also by 9?